Amendment # 2
Update to the Angelina & Neches River Authority Clean Rivers Program FY 2022/2023 QAPP

Prepared by the Angelina & Neches River Authority in Cooperation with the Texas Commission on Environmental Quality (TCEQ)

Effective: Immediately upon approval by all parties

Questions concerning this QAPP should be directed to:

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Justification

This document details the changes made to the basin-wide Quality Assurance Project Plan to add TKN to the ANRA Environmental Laboratory scope. This document also updates personnel changes, and addresses any other changes made to the quality program since the last amendment.

Summary of Changes

Section/Figure/Table	Page	Change	Justification
Section A1	2	Replaced Luis Medina with Katrina Smith as Project Manager Adding "Acting" to Jason Natho's title to match other instances throughout document Replaced Kyle Girten with Sarah Whitley as Team Leader Replaced Luis Medina with Sarah Whitley as Acting CRP Project Quality Assurance Specialist Added Andrew Sullivan as Acting Section Manager Added D. Jody Koehler as TCEQ's Quality Assurance Manager	Personnel changes at TCEQ Fixing omission from previous QAPP version.
Section A3	9	Replaced Luis Medina with Katrina Smith as Project Manager	Personnel changes at TCEQ
Section A4	11, 12	Replaced Luis Medina with Katrina Smith as Project Manager Replaced Luis Medina with Sarah Whitley as Acting CRP Project Quality Assurance Specialist Replaced Kyle Girten with Sarah Whitley as Water Quality Standards (WQS) and CRP Team Leader.	Personnel changes at TCEQ
Figure A4.1	15	Replaced Luis Medina with Katrina Smith as Project Manager Replaced Luis Medina with Sarah Whitley as Acting CRP Project Quality Assurance Specialist Replaced Kyle Girten with Sarah Whitley as TCEQ WQS & CRP Team Leader	Personnel changes at TCEQ
Section A6	17	Making ANRA Environmental Laboratory primary for TKN	Certification changes at ANRA Lab
Section B3	27	Making ANRA Environmental Laboratory primary for TKN	Certification changes at ANRA Lab

Table A7.2	48	Adding TKN to ANRA Environmental Laboratory Scope	Certification changes at ANRA Lab

Detail of Changes

A1 Approval Page

Texas Commission on Environmental Quality

Water Quality Planning Division

Electronically Approved 3/3/2023

Sarah Whitley, Team Leader Date
Water Quality Standards and Clean Rivers Program

Electronically Approved 3/3/2023

Sarah Whitley Date
Acting Project Quality Assurance Specialist
Clean Rivers Program

Electronically Approved 3/3/2023

Katrina Smith, Project Manager Date
Clean Rivers Program

Electronically Approved 2/24/2023

Cathy Anderson, Team Leader Date
Data Management and Analysis

Electronically Approved 3/6/2023

Andrew Sullivan, Acting Section Manager Date
Monitoring and Assessment Section

Monitoring Division

Electronically Approved 3/6/2023

Jason Natho Date
Acting Lead CRP Quality Assurance Specialist

Electronically Approved 3/7/2023

D. Jody Koehler Date
TCEQ Quality Assurance Manager

Angelina & Neches River Authority (ANRA)

Environmental Division – Clean Rivers Program

Electronically Approved 2/23/2023

Rene Barelas Date
Clean Rivers Program Coordinator

Electronically Approved 2/23/2023

Melissa Garcia Date
Laboratory Services Director

Electronically Approved 2/23/2023

Jeremiah Poling Date
Information Resources Manager

Environmental Division – ANRA Environmental Laboratory

Electronically Approved 2/23/2023

Melissa Garcia Date
Laboratory Services Director

Electronically Approved 2/23/2023

Hannah Crawford Date
Laboratory Manager

Lower Colorado River Authority (LCRA)

Environmental Laboratory Services (ELS)

Electronically Approved 2/23/2023

Dale Jurecka Date
Director, Environmental Laboratory Services

Electronically Approved 2/23/2023

Angel Mata Date
Regulatory Compliance and Safety Program Manager

Electronically Approved 2/24/2023

Jason Woods Date
Supervisor - ELS Customer and Project Services

Ana-Lab Corporation (Kilgore)

Electronically Approved 2/23/2023	Electronically Approved 2/23/2023
Bill Peery Date	Tracey Varvel Date
Vice President, Technical Services	Quality Manager

Pace Analytical (NOLA)

Pace Environmental Sciences

Electronically Approved 2/27/2023

Tracy Easley Date
General Manager

Electronically Approved 2/23/2023

Gabrielle Jones Date
Quality Manager

Electronically Approved 2/23/2023

Karen Brown Date
Project Manager

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Gabrielle Jones, Quality Manager
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A4 Project Task/Organization

Description of Responsibilities

TCEQ

Sarah Whitley
Water Quality Standards (WQS) and CRP Team Leader
Responsible for Texas Commission on Environmental Quality (TCEQ) activities supporting the development and implementation of the Texas Clean Rivers Program (CRP). Responsible for verifying that the TCEQ Quality Management Plan (QMP) is followed by CRP staff. Supervises TCEQ CRP staff. Reviews and responds to any deficiencies, corrective actions, or findings related to the area of responsibility. Oversees the development of Quality Assurance (QA) guidance for the CRP. Reviews and approves all QA audits, corrective actions, reports, work plans, contracts, QAPPs, and TCEQ Quality Management Plan. Enforces corrective action, as required, where QA protocols are not met. Ensures CRP personnel are fully trained.

Jason Natho Acting Lead CRP Quality Assurance Specialist
Participates in the development, approval, implementation, and maintenance of written QA standards (e.g., Program Guidance, SOPs, QAPPs, QMP). Assists program and project manager in developing and implementing quality system. Serves on planning team for CRP special projects. Coordinates the approval of CRP QAPPs. Prepares and distributes annual audit plans. Conducts monitoring systems audits of Planning Agencies. Conveys QA problems to appropriate management. Recommends that work be stopped in order to safeguard programmatic objectives, worker safety, public health, or environmental protection. Ensures maintenance of QAPP records and audit records for the CRP.

Katrina Smith
CRP Project Manager
Responsible for the development, implementation, and maintenance of CRP contracts. Tracks, reviews, and approves deliverables. Participates in the development, approval, implementation, and maintenance of written QA standards (e.g., Program Guidance, SOPs, QAPPs, QMP). Assists CRP Lead QA Specialist in conducting Basin Planning Agency audits. Verifies QAPPs are being followed by contractors and that projects are producing data of known quality. Coordinates project planning with the Basin Planning Agency Project Manager. Reviews and approves data and reports produced by contractors. Notifies QA Specialists of circumstances which may adversely affect the quality of data derived from the collection and analysis of samples. Develops, enforces, and monitors corrective action measures to ensure contractors meet deadlines and scheduled commitments.

Cathy Anderson
Team Leader, Data Management and Analysis (DM&A) Team
Participates in the development, approval, implementation, and maintenance of written QA standards (e.g., Program Guidance, SOPs, QAPPs, QMP). Ensures DM&A staff perform data management-related tasks.

Scott Delgado
CRP Data Manager, DM&A Team
Responsible for coordination and tracking of CRP data sets from initial submittal through CRP Project Manager review and approval. Ensures that data are reported following instructions in the Data Management Reference Guide, July 2019 or most current version (DMRG). Runs automated data validation checks in the Surface Water Quality Management Information System (SWQMIS) and coordinates data verification and error correction with CRP Project Managers. Generates SWQMIS summary reports to assist CRP Project Managers' data review. Identifies data anomalies and inconsistencies. Provides training and guidance to CRP and Planning Agencies on technical data issues to ensure that data are submitted according to documented procedures. Reviews QAPPs for valid stream monitoring stations. Checks validity of parameter codes, submitting entity code(s), collecting entity code(s), and monitoring type code(s). Develops and maintains data management-related SOPs for CRP data management. Coordinates and processes data correction

requests. Participates in the development, implementation, and maintenance of written QA standards (e.g., Program Guidance, SOPs, QAPPs, QMP).

Sarah Whitley
Acting CRP Project Quality Assurance Specialist
Serves as liaison between CRP management and TCEQ QA management. Participates in the development, approval, implementation, and maintenance of written QA standards (e.g., Program Guidance, SOPs, QAPPs, QMP). Serves on planning team for CRP special projects and reviews QAPPs in coordination with other CRP staff. Coordinates documentation and implementation of corrective action for the CRP.

ANRA

Rene Barelas
ANRA Clean Rivers Program Coordinator
Responsible for writing and maintaining the QAPP and monitoring implementation of the QAPP. Responsible for maintaining records of QAPP distribution, including appendices and amendments. Responsible for maintaining written records of sub-tier commitment to requirements specified in this QAPP. Responsible for implementing and monitoring CRP requirements in contracts, QAPPs, and QAPP amendments and appendices. Ensures that field staff is properly trained and that training records are maintained. Coordinates basin planning activities and work of basin partners. Ensures monitoring systems audits are conducted to ensure QAPPs are followed by ANRA participants and that projects are producing data of known quality. Ensures that subparticipants are qualified to perform contracted work. Ensures CRP project managers and/or QA Specialists are notified of deficiencies and corrective actions, and that issues are resolved. Responsible for validating that data collected are acceptable for reporting to the TCEQ.

Melissa Garcia
ANRA Laboratory Services Director
Responsible for coordinating the implementation of the QA program. Responsible for identifying, receiving, and maintaining project QA records. Responsible for coordinating with the TCEQ QAS to resolve QA-related issues. Notifies ANRA Clean Rivers Program Coordinator of particular circumstances that may adversely affect the quality of data. Coordinates and monitors deficiencies and corrective action. Coordinates and maintains records of data verification and validation. Coordinates the research and review of technical QA material and data related to water quality monitoring system design and analytical techniques.

Hannah Crawford
ANRA Laboratory Manager
Responsible for overall performance, administration, and reporting of analyses performed by ANRA's Environmental Laboratory. Responsible for supervision of laboratory personnel involved in generating analytical data for the project. Ensures that laboratory personnel have adequate training and a thorough knowledge of this QAPP and related SOPs. Responsible for oversight of all laboratory operations ensuring that all QA/QC requirements are met, documentation is complete and adequately maintained, and results are reported accurately.

Jeremiah Poling
ANRA Information Resources Manager
Responsible for ensuring that field data are properly reviewed and verified. Responsible for the transfer of basin quality-assured water quality data to the TCEQ in a format compatible with SWQMIS. Maintains quality-assured data on ANRA internet sites.

Kimberly Wagner
Communications Director
Responsible for education and outreach regarding ANRA's Clean Rivers Program. Also responsible for coordinating and conducting CRP sample collection in accordance with the basin coordinated monitoring schedule and the QAPP.

LCRA ELS

Dale Jurecka
Director, Environmental Laboratory Services
Responsible for overall performance, administration, and reporting of analyses performed by LCRA's Environmental Laboratory Services. Responsible for supervision of laboratory personnel involved in generating analytical data for the project. Ensures that laboratory personnel have adequate training and a thorough knowledge of this QAPP and related SOPs. Responsible for oversight of all laboratory operations ensuring that all QA/QC requirements are met, documentation is complete and adequately maintained, and results are reported accurately.

Angel Mata
Regulatory Compliance and Safety Program Manager
Responsible for the overall quality control and quality assurance of analyses performed by LCRA's ELS. Monitors the implementation of the QM/QAPP within the laboratory to ensure complete compliance with QA data quality objectives, as defined by the contract and in this QAPP. Conducts in-house audits to ensure compliance with written SOPs and to identify potential problems. Responsible for supervising and verifying all aspects of the QA/QC in the laboratory.

Jason Woods
Supervisor – ELS Customer and Project Services
Responsible for analyses performed by LCRA ELS for this project. Responsible for project setup in LIMS. Responsible for LCRA ELS laboratory and field staff correction action communication with the LCRA ELS Quality Officer. Makes LCRA ELS data available to the ANRA Information Resources Manager. Notifies the LCRA ELS Quality Officer, ANRA Laboratory Services Director and ANRA Clean Rivers Program Coordinator of laboratory analysis issues that may invalidate data.

Ana-Lab

Bill Peery
Vice President, Technical Services
Responsible for overall performance, administration, and reporting of analyses performed by Ana-Lab. Responsible for supervision of laboratory personnel involved in generating analytical data for the project. Ensures that laboratory personnel have adequate training and a thorough knowledge of this QAPP and related SOPs. Responsible for oversight of all laboratory operations ensuring that all QA/QC requirements are met, documentation is complete and adequately maintained, and results are reported accurately.

Tracey Varvel
Quality Manager
Responsible for the overall quality control and quality assurance of analyses performed by Ana-Lab. Monitors the implementation of the QM/QAPP within the laboratory to ensure complete compliance with QA data quality objectives, as defined by the contract and in this QAPP. Conducts in-house audits to ensure compliance with written SOPs and to identify potential problems. Responsible for supervising and verifying all aspects of the QA/QC in the laboratory.

Pace (NOLA)

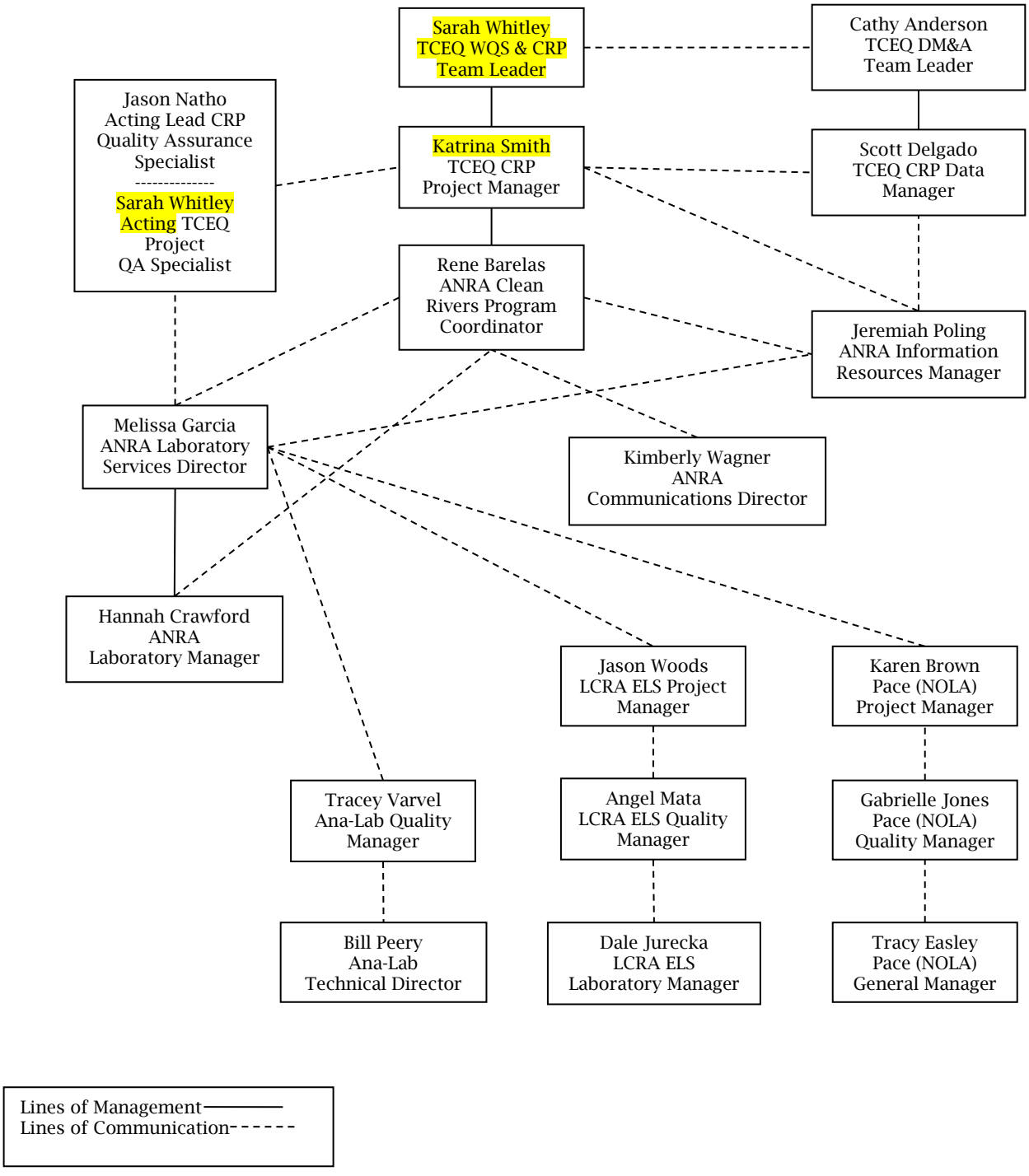
Karen Brown
Project Manager
Responsible for analyses performed by Pace (NOLA) for this project. Responsible for project setup in LIMS. Responsible for Pace (NOLA) laboratory and field staff corrective action communication with the Pace (NOLA) Quality Manager. Makes Pace (NOLA) data available to the ANRA Data Manager. Notifies the Pace (NOLA) Quality Manager, ANRA Laboratory Services Director, and ANRA Clean Rivers Program Coordinator of laboratory analysis issues that may invalidate data.

Tracy Easley
General Manager
Responsible for overall performance, administration, and reporting of analyses performed by Pace (NOLA). Responsible for supervision of laboratory personnel involved in generating analytical data for the project. Ensures that laboratory personnel have adequate training and a thorough knowledge of this QAPP and related SOPs. Responsible for oversight of all laboratory operations ensuring that all QA/QC requirements are met, documentation is complete and adequately maintained, and results are reported accurately.

Gabrielle Jones
Quality Manager
Responsible for the overall quality control and quality assurance of analyses performed by Pace (NOLA). Monitors the implementation of the QM/QAPP within the laboratory to ensure complete compliance with QA data quality objectives, as defined by the contract and in this QAPP. Conducts in-house audits to ensure compliance with written SOPs and to identify potential problems. Responsible for supervising and verifying all aspects of the QA/QC in the laboratory.

Project Organization Chart

Figure A4.1. Organization Chart - Lines of Communication



A6 Project/Task Description

During the FY 2022-2023 biennium, ANRA's monitoring program will include routine (RT) monitoring across the basin.

This routine monitoring includes the following field parameters: pH, water temperature, dissolved oxygen, specific conductance, secchi depth (disc or tube measuring transparency), total water depth (at reservoir sites), instantaneous stream flow (at stream or river sites), flow severity, flow measurement method, days since last significant rainfall, present weather, and stream flow estimate (when instantaneous flow is not available).

This routine monitoring also includes the following bacteriological and conventional parameters analyzed in the laboratory:

- *Escherichia coli* (*E. coli)*
- Ammonia, as N
- Nitrate, as N (or combined Nitrate + Nitrite, as N when separate analyses cannot be completed)
- Nitrite, as N (or combined Nitrate + Nitrite, as N when separate analyses cannot be completed)
- Total Kjeldahl Nitrogen (TKN)
- Total Phosphorus
- Sulfate
- Chloride
- Total Suspended Solids
- Chlorophyll *a*
- Pheophytin *a*

ANRA Environmental Laboratory will perform the sample analyses for bacteriological and conventional parameters with the exception of Nitrate + Nitrite, as N.

Pace (NOLA) will serve as the primary lab for Nitrate + Nitrite analyses, when necessary, and Ana-Lab and LCRA ELS will serve as backup labs. Ana-Lab, LCRA ELS, and Pace (NOLA) will serve as alternate laboratories for the analysis of conventional parameters in their respective A7 tables in the event that sample analysis cannot be conducted at ANRA Environmental Laboratory (i.e., instrument failure, service or maintenance is required, etc.).

See Appendix B for the project-related work plan tasks and schedule of deliverables for a description of work defined in this QAPP.

See Appendix B for sampling design and monitoring pertaining to this QAPP.

Amendments to the QAPP

Revisions to the QAPP may be necessary to address incorrectly documented information or to reflect changes in project organization, tasks, schedules, objectives, and methods. The ANRA Clean Rivers Program Manager will direct requests for amendments to the CRP Project Manager electronically. ANRA will submit a completed QAPP Amendment document, including a justification of the amendment, a table of changes, and all pages, sections, and attachments affected by the amendment. Amendments are effective immediately upon approval by ANRA Clean Rivers Program Manager, ANRA Laboratory Services Director, CRP Project Manager, the CRP Lead QA Specialist, the CRP Project QA Specialist, and additional parties affected by the amendment. Amendments are not retroactive. No work shall be implemented without an approved QAPP or amendment prior to the start of work. Any activities under this contract that commence prior to the approval of the governing QA document, constitute a deficiency, and are subject to corrective action as described in section C1 of this QAPP. Any deviation or deficiency from this QAPP, which occurs after the execution of this QAPP, will be addressed through a Corrective Action Plan (CAP). An amendment may be a component of a CAP to prevent future recurrence of a deviation.

The ANRA Clean Rivers Program Manager will incorporate amendments into the QAPP by way of attachment, and distribute to personnel on the distribution list. If adherence letters are required, ANRA will secure an adherence letter from each sub-tier project participant (e.g., subcontractors, sub-participant, or other units of government) affected by the amendment stating the organization's awareness of and commitment to requirements contained in each amendment to the QAPP. ANRA will maintain this documentation as part of the project's QA records, and ensure that the documentation is available for review.

Special Project Appendices

Projects requiring QAPP appendices will be planned in consultation with ANRA and the TCEQ Project Manager and TCEQ technical staff. Appendices will be written in an abbreviated format and will reference the Basin QAPP where appropriate. Appendices will be approved by ANRA Clean Rivers Program Manager, ANRA Laboratory Services Director, the CRP Project manager, the CRP Project QA Specialist, the CRP Lead QA Specialist and additional parties affected by the Appendix, as appropriate. Copies of approved QAPP appendices will be distributed by ANRA to project participants before data collection activities commence. ANRA will secure written documentation from each sub-tier project participant (e.g., subcontractors, subparticipants, other units of government) stating the organization's awareness of and commitment to requirements contained in each special project appendix to the QAPP. ANRA will maintain this documentation as part of the project's QA records, and ensure that the documentation is available for review.

B3 Sample Handling and Custody

Sample Tracking

Proper sample handling and custody procedures ensure the custody and integrity of samples beginning at the time of sampling and continuing through transport, sample receipt, preparation, and analysis.

A sample is in custody if it is in actual physical possession or in a secured area that is restricted to authorized personnel. The Chain of Custody (COC) form is a record that documents the possession of the samples from the time of collection to receipt in the laboratory. Record the following information concerning the sample on the COC form (See Appendix B).

- Site identification
- Analyses required
- Sample matrix
- Date and time of collection
- Preservative used
- Name of collector
- Custody transfer signatures, and dates and time of transfer

Sample Labeling

Label samples in the field with indelible ink. Label information must include:

- Site identification
- Date and time of collection
- Preservative added, if applicable
- Indication of field-filtration for metals, as applicable
- Sample type (i.e., analyses) to be performed

Sample Handling

ANRA field data sheets are supplied to all field personnel prior to initiation of collection procedures. The field data sheets have spaces dedicated to recording of all pertinent field observations and water quality parameters. The field staff has the prime responsibility to ensure that all pertinent

information is recorded correctly and in the proper units.

The ANRA Sample Custodian examines all samples brought to the ANRA Environmental Laboratory for proper documentation, holding times, sample temperature, and preservation. The Sample Custodian accepts delivery by signing the final portion of the official COC submitted with the samples. The accepted samples are immediately logged into the laboratory LIMS and assigned a unique laboratory sample identification (ID) number. It is the responsibility of the sample custodian to login samples in the proper format, and to apply the unique laboratory sample ID number to the sample container. The sample custodian places the sample container in the proper laboratory refrigerator.

Ana-Lab will serve as a backup for all parameters in their A7 table in the event that the primary lab is unable to perform the required analysis. The sample custodian relinquishes samples to Ana-Lab for analysis, after first receiving, documenting, logging in, and labeling the sample containers. The sample custodian packs the samples on ice in a cooler to maintain a temperature between freezing and 6˚C, seals the cooler containing the samples and appropriate COC forms, and then schedules a pickup with the Ana-Lab courier. ANRA relinquishes the sealed cooler to the Ana-Lab courier, who receives it, transports it to Ana-Lab, and relinquishes it. Ana-Lab verifies the condition of the samples, receives the samples, and logs them into the LIMS.

LCRA ELS will serve as a backup for all parameters in their A7 table in the event that the primary lab is unable to perform the required analysis. The sample custodian relinquishes samples to LCRA ELS for analysis, after first receiving, documenting, logging in, and labeling the sample containers. The sample custodian packs the samples on ice in a cooler to maintain a temperature between freezing and 6˚C, seals the cooler containing the samples and appropriate COC forms, and then schedules a pickup with FedEx, UPS, or other appropriate shipping service/courier. ANRA relinquishes the sealed cooler to the courier, who receives it, transports it to LCRA ELS, and relinquishes it. LCRA ELS verifies the condition of the samples, receives the samples, and logs them into the LIMS.

Pace (NOLA) will serve as the primary lab for Nitrate plus Nitrite analyses and as a backup for all other parameters in their A7 table in the event that the primary lab is unable to perform the required analysis. The sample custodian relinquishes samples to Pace (NOLA) for analysis, after first receiving, documenting, logging in, and labeling the sample containers. The sample custodian packs the samples on ice in a cooler to maintain a temperature between freezing and 6˚C, seals the cooler containing the samples and appropriate COC forms, and then schedules a pickup with FedEx. ANRA relinquishes the sealed cooler to the courier, who receives it, transports it to Pace (NOLA), and relinquishes it. Pace (NOLA) verifies the condition of the samples, receives the samples, and logs them into the LIMS.

Proper sample custody is a joint effort of the field sampling staff, the sample transporter, and the laboratory staff. The main documentation of proper sample custody for all events up to the arrival of the sample at the laboratory is the chain-of-custody (COC) form (see Appendix B). If any information or signatures on the COC form are not completely filled out, there is a gap in the documentation of sample custody. In such an event, the laboratory sample custodian will question whether the sample should be accepted. Refer all data acceptance questions to the Laboratory Services Director.

The following procedures outline sample handling from collection to receipt of analytical results:

1. After transferring a sample into the proper sample container, tightly cap the container as quickly as possible to prevent the loss of volatile components and to exclude possible oxidation. Where appropriate, preserve samples in the field. Following field measurements, pack the samples on ice in a cooler to maintain a temperature between freezing and 6˚C, and then transport to the laboratory as soon as possible.
2. Label the container with the proper laboratory sample identification number (a unique designation) on a label securely affixed to the container. Use a pen with waterproof ink when labeling the sample container and filling out the appropriate COC form.

3. Fill out the COC form completely and accurately.

4. Send samples requiring subcontractor lab analysis to applicable subcontract lab. Include the corresponding lab's completed COC form. Sign the COC as relinquished, if sending to Ana-Lab, give it to the Ana-Lab courier to sign as received, otherwise write FedEx/UPS/applicable shipping service in the received section, scan all shipping paperwork together and save on the server, then seal paperwork in a bag and send with the sample cooler. The subcontract lab report includes the complete COC form.

Sample Tracking Procedure Deficiencies and Corrective Action

All deficiencies associated with COC procedures, as described in this QAPP, are immediately reported to ANRA Clean Rivers Program Manager. These include such items as delays in transfer resulting in holding time violations; violations of sample preservation requirements; incomplete documentation, including signatures; possible tampering of samples; broken or spilled samples, etc. ANRA Clean Rivers Program Manager in consultation with ANRA Laboratory Services Director will determine if the procedural violation may have compromised the validity of the resulting data. Any failures that have reasonable potential to compromise data validity will invalidate data and the sampling event should be repeated. The resolution of the situation will be reported to the TCEQ CRP Project Manager in the project progress report. CAPs will be prepared by ANRA's Laboratory Services Director and submitted to TCEQ CRP Project Manager along with project progress report.
The definition of and process for handling deficiencies and corrective action are defined in Section C1.

Table A7.2 – Measurement Performance Specifications for the Angelina & Neches River Authority

Conventional Parameters in Water

Parameter	Units	Matrix	Method	Parameter Code	TCEQ AWRL	LOQ	LOQ Check Sample %Rec	Precision (RPD)	Bias %Rec. of LCS	Lab
RESIDUE, TOTAL NONFILTRABLE (MG/L)	mg/L	water	SM 2540D	00530	5	2.5	N/A	N/A	N/A	ANRA
NITROGEN, AMMONIA, TOTAL (MG/L AS N)	mg/L	water	SM 4500-NH3 D	00610	0.1	0.1	70-130	20	80-120	ANRA
NITROGEN, KJELDAHL, TOTAL (MG/L AS N)	mg/L	water	EPA 351.2 Rev 2.0 (1993)	00625	0.2	0.2	70-130	20	80-120	ANRA
NITRITE NITROGEN, TOTAL (MG/L AS N)	mg/L	water	EPA 300.0 Rev. 2.1 (1993)	00615	0.05	0.05	70-130	20	80-120	ANRA
NITRATE NITROGEN, TOTAL (MG/L AS N)	mg/L	water	EPA 300.0 Rev. 2.1 (1993)	00620	0.05	0.05	70-130	20	80-120	ANRA
PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)	mg/L	water	EPA 365.1 (1993)	00665	0.06	0.02	70-130	20	80-120	ANRA
CHLORIDE (MG/L AS CL)	mg/L	water	EPA 300.0 Rev. 2.1 (1993)	00940	5	5	70-130	20	80-120	ANRA
SULFATE (MG/L AS SO4)	mg/L	water	EPA 300.0 Rev. 2.1 (1993)	00945	5	5	70-130	20	80-120	ANRA
PHEOPHYTIN-A UG/L FLUOROMETRIC METHOD	µg/L	water	EPA 445.0 Rev. 1.2 (1997)	32213	3	2	N/A	N/A	N/A	ANRA
CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L	µg/L	water	EPA 445.0 Rev. 1.2 (1997)	70953	3	2	N/A	20	80-120	ANRA